Remarks

The Examiner rejected claims 1, 4-7, and 9-21 under 35 U.S.C. 103(a) as allegedly being unpatentable over Kawamura et al (5,621,840).

The Examiner rejected claim 22 under 35 U.S.C. 103(a) as being unpatentable over Kawamura et al in view of Jain (5,249,053).

Applicants respectfully traverse the §103 rejections with the following arguments.

35 U.S.C. 103(a)

Claims 1, 4-7, and 9-21 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Kawamura et al (5,621,840).

The Examiner alleges that "Regarding claims 1 and 13-15, Kawamura et al discloses a MPEG recording/reproducing device that records data blocks (col. 8, lines 10-17) and outputs data blocks to produce a sequence of video images in figures 17 and 18. Kawamura et al discloses that MPEG coding codes data in I, P, and B frames; and I frames are coded without reference to other frames; and P and B frames coded in reference to other frames (col. 3, lines 1-12). Additionally, it is inherent that each frame (or image sequence) is coded into a plurality of blocks (or macroblocks) in MPEG format. Kawamura et al also discloses inserting additional data blocks into the stream, each of the additional blocks carrying data identifying the relative location of the first or only data block of an I frame (col. 7, lines 26-37). However, Kawamura et al does not disclose that a additional data block is inserted at fixed periodically repeated intervals, whereinthe additional data blocks carry data identifying the relative location in the data block stream of the

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first or only data block in the data block stream of the closet previously formatted intra-coded image frame.

Kawamura et al teaches in the prior art that a fixed rate of compression results in the I frames occurring at predetermined positions (col. 3, lines 13-23). The additional data blocks (i.e. entry packet, fig. 10) are inserted before the video packet header for a packet of video data containing an I picture. If the compression rate is fixed the I frames will be located at predetermined positions in the video stream. Therefore, the additional data blocks (or entry packets) will be inserted at fixed periodically repeated intervals.

It would have been highly desirable to have additional data blocks in the fixed compression rates so that the position of the I frame does not have to be calculated (col. 3, lines 12-23), thereby removing the need for circuitry to calculate the position of entry points and resulting in a more affordable device. Additionally, having a fixed compression rate also allows for easy prediction of the recording area needed to record a desired amount of video data.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to have entry points in a fixed compression signal in the device of Kawamura et al."

As to claims 1, 6, 11, and 12, Applicants respectfully contend that Kawamura does not teach or suggest each and every feature of claims 1, 6, 11, and12. For example Kawamura does not teach or suggest the features of " characterised in that the step of formatting comprises the further steps of identifying intra-coded frames and of inserting **additional** data blocks in said data block stream at **fixed periodically repeated intervals**, each of said additional blocks carrying data identifying the relative location in the data block stream of the first or only data block in the data block stream of the closest previously formatted intra-coded image frame " (emphasis added) as admitted by the Examiner. Kawamura teaches a video data transmission method to transmit

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video encoded data for selected high speed reproduction. Applicants teach that additional data blocks for locating a closest previously formatted intra-coded image frame will be placed in a data block stream at **fixed periodically repeated intervals.**

The Examiner admits that " Kawamura et al does not disclose that a additional data block is inserted at fixed periodically repeated intervals, wherein the additional data blocks carry data identifying the relative location in the data block stream of the first or only data block in the data block stream of the closet previously formatted intra-coded image frame ".

The Examiner alleges that " Kawamura et al teaches in the prior art that a fixed rate of compression results in the I frames occurring at predetermined positions (col. 3, lines 13-23). The additional data blocks (i.e. entry packet, fig. 10) are inserted before the video packet header for a packet of video data containing an I picture. If the compression rate is fixed the I frames will be located at predetermined positions in the video stream. Therefore, the additional data blocks (or entry packets) will be inserted at fixed periodically repeated intervals ".

The Examiner alleges that " It would have been highly desirable to have additional data blocks in the fixed compression rates so that the position of the I frame does not have to be calculated (col. 3, lines 12-23), thereby removing the need for circuitry to calculate the position of entry points and resulting in a more affordable device. "

In response, Applicants respectfully contend that Kawamura does not teach or suggest that **additional data blocks** for locating a closest previously formatted intra-coded image frame will be placed in a data block stream at **fixed periodically repeated intervals** as required by Applicant's claims 1, 6, 11, and 12. In contrast, Kawamura teaches in col. 3 lines 13-23 that "In the case where compression of fixed rate is being carried out with respect to video data, since I pictures cyclically appear at predetermined positions, corresponding

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position is determined by calculation, thereby making it possible to provide an access thereto". Applicants contend that the Examiner has incorrectly concluded that it would be " highly desirable to have additional data blocks in the fixed compression rates so that the position of the I frame does not have to be calculated " since the mere placement of the I pictures at cyclically predetermined positions makes it unnecessary to use additional data blocks at fixed periodically repeated intervals because the cyclical placement of the I frames enable the positioning of the I frames to be identified independent of where the additional data blocks are placed. Furthermore, Applicants contend that the Examiners argument that it would be desirable " to have additional data blocks in the fixed compression rates so that the position of the I frame does not have to be calculated " is not persuasive **since the position of the additional data blocks would have to be calculated instead of the I frames.** Applicants contend that the Examiner has not proved a *prima facie* case of obviousness. Applicants also note that the Examiner learned of the novel idea of extra data blocks at **fixed periodically repeated intervals** from the present patent application itself, and did not consider it necessary to prove that any other public document teaches or suggests this feature.

Moreover, the Examiner has alleged that it would be "It would have been highly desirable to have additional data blocks in the fixed compression rates so that the position of the I frame does not have to be calculated (col. 3, lines 12-23), thereby removing the need for circuitry to calculate the position of entry points and resulting in a more affordable device. Additionally, having a fixed compression rate also allows for easy prediction of the recording area needed to record a desired amount of video data.." The Examiner's preceding allegation is not supported in Kawamura. In col. 3, lines 12-23 of Kawamura, Kawamura suggests that such calculation is desirable because it enables the positions of the I-blocks to be determined. Kawamura does not teach or suggest that if the position of the I frame does not have to be

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calculated, **extra circuitry may be removed resulting in a more affordable device.** The Examiner has not supported his allegation that extra circuitry may be removed resulting in a more affordable device if the position of the I frame does not have to be calculated. Applicants request that the Examiner identify extra circuitry in Kawamura (i.e., cited reference of rejection) that would be removed and that not having to calculate if the position of the I blocks would enable said circuitry to be removed. Applicants reiterate that the position of the extra data blocks would have to be calculated instead of the I frames. Thus, there is no net benefit from using the extra data blocks at periodically fixed intervals.

The Examiner admits that " Kawamura et al does not suggest using the additional data blocks for data having a fixed compression rate," alleging that "one of ordinary skill in the art recognizes that additional data blocks can be used for data having a fixed compression rate. Further, one is motivated to do so because it would eliminate circuitry needed to calculate the position of I pictures for data having a fixed compression rate" Applicants contend that the Examiner's preceding allegation is not supported in Kawamura. Applicants ask how "one of ordinary skill in the art recognizes that additional data blocks can be used for data having a fixed compression rate ". Applicants contend that the Examiner has use nothing more than hindsight reconstruction to use additional data blocks for data having a fixed compression rate and and **did not consider it necessary to prove that any other public document teaches or suggests this feature.** As to the Examiner's allegation that "one is motivated to do so because it would eliminate circuitry needed to calculate the position of I pictures for data having a fixed compression rate ", Applicants request that the Examiner identify extra circuitry in Kawamura (i.e., cited reference of rejection) that would be removed and that not having to calculate if the position of the I blocks would enable said circuitry to be removed as argued *supra*.

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Based on the preceding arguments, Applicants respectfully maintains that Kawamura does not anticipate claims 1, 6, 11, and 12 and that claims 1, 6, 11, and 12 are in condition for allowance. Since claims 4, 5, and 13-15 depend from claim 1, claims 7-10 and 16-18 depend from claim 6, and claims 19-21 depend from claim 11, Applicants contend that claims 4, 5, 7-10, 13-15, and 19-21 are likewise in condition for allowance.

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Conclusion

Based on the preceding arguments, Applicants respectfully believes that claims 1, 4-7, 9-22, and the entire application, are in condition for allowance and therefore request favorable action. However, should the Examiner believe anything further is necessary in order to place the application in better condition for allowance, or if the Examiner believes that a telephone interview would be advantageous to resolve the issues presented, the Examiner is invited to contact the Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

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